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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,019	07/24/2003	Robert Zaccaria	12601/1	9968

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EXAMINER

WACHSMAN, HAL D

ART UNIT PAPER NUMBER

2857

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,019

Applicant(s)

ZACCARIA, ROBERT

Examiner

Hal D. Wachsman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/159,497.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-24-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The Applicant's remarks in the response to restriction requirement filed 2-8-05 are persuasive and the requirement for restriction is hereby withdrawn. Consequently, all of the claims, claims 21-40, have been examined on the merits.
2. The CROSS-REFERENCE TO RELATED APPLICATIONS section on the first page of the specification has a blank space for the patent number for U.S. application serial no. 09/159,497 which is now U.S. patent no. 6,611,774. In addition, this section does not refer to the claim for foreign priority to the Canada patent 2,242,497 of 8-19-98. Appropriate correction is required.
3. The Abstract is objected to because it is greater than 150 words in length and contains purported merits (i.e. "...is easily performed"). Appropriate correction is required.
4. Page 3, line 15, of the specification cites "each of probe means" however was this intended to be "each one of the probe means" ? Page 4, lines 9-10, of the specification contains legal phraseology (i.e. "...each of *said* at least one probe means..."). Appropriate correction is required.
5. Claims 33-38 are objected to under 37 C.F.R. 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Claim 33, line 11, cites "...selected by control signals" however are these the same control signals previously cited in the claim ? Claim 38, line 9, cites "...assigned to the corresponding upon..." but corresponding what exactly is being referred to here ? The examiner asks the applicant to better claim the limitations cited above. While the

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examiner understands the intentions of the applicant he feels confusion could be drawn from the limitations cited above. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 38 is a hybrid claim, that is a single claim which claims both an apparatus and the method steps of using the apparatus (see Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). Although the preamble of claim 38 first states "A method of initializing a plurality of probes in a battery monitoring system..." what follows after that through the beginning of line 19 of the claim are apparatus limitations. Then, from line 20 through the end of claim 38 are the method steps of using the apparatus.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claim 38 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As already shown in paragraph 7 above, claim

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38 is a hybrid claim as the claim is directed toward neither a "process" nor a "machine", but rather embraces or overlaps two different statutory classes of inventions set forth in 35 U.S.C. 101 which was drafted so as to set forth the statutory classes of invention in the alternative only.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 21-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 respectively of U.S.

Patent No. 6,611,774. Although the conflicting claims are not identical, they are not patentably distinct from each other because the "at least one probe for respectively probing.." in claim 1 of patent no. 6,611,774 anticipates the "at least one probe configured to respectively probe..." in claim 21 of the instant application. The five wire bus with the description of what each of the wires are used for in claim 1 of the patent anticipates the bus with the lines described in the last 4 lines of claim 21 of the instant

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application as a wire represents a line and as the fourth and fifth wires in claim 1 of the patent are both being used for supplying voltage, that anticipates the voltage supply lines in claim 21 of the instant application. In addition, the controllable sensing means in claim 1 of the patent anticipates the controllable sensor in claim 21 of the instant application. Similarly, the communication means in claim 1 of the patent anticipates the communication device in claim 21 of the instant application. The controllable sensing means in claim 7 of the patent anticipates the controllable sensor in claim 27 of the instant application. Similarly, the communication means in claim 7 of the patent anticipates the communication device in claim 27 of the instant application. The five wire bus with the description of what each of the wires are used for in claim 7 of the patent anticipates the bus with the lines described in the lines 13-16 of claim 27 of the instant application as a wire represents a line and as the fourth and fifth wires in claim 7 of the patent are both being used for supplying voltage, that anticipates the voltage supply lines in claim 27 of the instant application. The controllable sensing means in claim 13 of the patent anticipates the controllable sensor in claim 33 of the instant application. Similarly, the communication means in claim 13 of the patent anticipates the communication device in claim 33 of the instant application. The at least one current injection means of claim 13 of the patent anticipates the at least one current injection device of claim 33 of the instant application. The memory means and calculating means of claim 13 of the patent anticipate the memory and calculation device of claim 33 of the instant application.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurst (5,281,920) in view of "System noise as a signal source for impedance measurements on battery strings" (Robinson).

As per claim 39, Wurst (Abstract, col. 3 lines 10-15) discloses "injecting an alternating current in each string of batteries". Wurst (Abstract, col. 2 lines 24-34) discloses "measuring a voltage across each battery". Wurst (Abstract, col. 5 lines 21-30, col. 6 lines 19-23) discloses impedance calculation of each battery but does not explicitly disclose that the impedance is being obtained by dividing the voltage by the current for each battery. However, Robinson (page 365, left column) teaches this excepted feature. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Robinson to the invention of Wurst as specified above because as taught by Wurst (col. 6 lines 19-21) to permit the calculation of impedance from the measured voltage the current can also be measured. Thus, the well known Ohm's law can be applied, as shown in Robinson in which impedance can be derived from the voltage and current.

As per claim 40, Wurst (Abstract, col. 3 lines 10-15) discloses "injecting a current in each string of batteries". Wurst (Abstract, col. 2 lines 24-34) discloses "measuring a voltage across each battery". Wurst (Abstract, col. 5 lines 21-30, col. 6

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lines 19-23) discloses impedance calculation of each battery but does not explicitly disclose that the impedance is being obtained by dividing the voltage by the current for each battery. However, Robinson (page 365, left column) teaches this excepted feature. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Robinson to the invention of Wurst as specified above because as taught by Wurst (col. 6 lines 19-21) to permit the calculation of impedance from the measured voltage the current can also be measured. Thus, the well known Ohm's law can be applied, as shown in Robinson in which impedance can be derived from the voltage and current.

14. The following references are cited as being art of general interest: "Monitoring of multicell battery string with single sensing wire" (Noworolski et al.) which disclose a battery monitoring system that utilizes only a single sense wire for each string, Puchianu (WO 98/32181) which discloses a battery signaling system with a daisy chain configuration, Alvarez et al. (5,821,757) which disclose a battery impedance measurement system, Letchak et al. (5,661,463) which disclose monitoring multiple battery strings, Russo (5,969,625) which discloses a battery resistance monitor and Gottlieb et al. (6,274,950) which discloses a battery communication system employing daisy chaining.

15. No claims are allowed.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D. Wachsman whose telephone number is 571-272-

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2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Hal D Wachsmann
Primary Examiner
Art Unit 2857

HW
April 25, 2005